We claim:

1. A purified heparinase II isolated from *Heparinum favobacterium* free of other lyase activity.

2. A purified heparinase III isolated from *Heparinum favobacterium* free of other lyase activity.

3. The heparinase III of claim 2 which does not cleave heparin sulfate.

4. The heparinase III of claim 2 stabilized with a protein.

5. The heparinase III of claim 4 stabilized with albumin.

6. A method for purifying heparinase I, II, and III from *Heparinum flavobacterium* comprising the steps of

lysing *Flavobacterium heparinum* cells,

removing cell debri and nucleic acids from the cell lysate,

absorption of heparinase I, II, and III to hydroxyapatite,

absorption of non-heparinase I, II, and III proteins to QAE-resin,

separation of heparinase I, II, and III by HPLC on a hydroxylapatite column,

purification of the separated heparinases by cation exchange FPLC, and

purification of the separated heparinases by gel permeation HPLC.

7. The method of claim 6 wherein the nucleic acids are removed by precipitation with protamine.

8. The method of claim 6 wherein the heparinases are separated on the hydroxylapatite column by elution with a salt gradient.

9. The method of claim 6 wherein the heparinases are eluted from the cation exchange column by a gradient of increasing salt concentration.

10. A monoclonal antibody cross-reactive with differential affinities for heparinase I, II, and III from *Heparinum flavobacterium*.

11. The antibody of claim 10 wherein the antibody is produced by fusion of lymphocytes from a mouse immunized with heparinase I and mouse myeloma cells, then screened for reactivity with all three heparinases I, II, and III.

12. A method for detecting heparinase comprising reacting a sample having heparinase activity with an antibody cross-reactive with differential affinities for heparinase I, II, and III from *Heparinum flavobacterium* and determining the extent of the reaction.

13. The method of claim 12 wherein the sample is derived from *Heparinum flavobacterium*.

14. The method of claim 12 wherein the heparinase in the sample is isolated and reacted with more than one antibody to determine its structural similarity to heparinase I, II, and III.

15. The method of claim 12 wherein the reactivity of the antibodies with the heparinase is determined by immunoblotting.

16. A method for cleaving heparin and heparan sulfate comprising reacting the heparin or heparan sulfate with a purified heparinase selected from the group consisting of heparinase I, II and III from *Heparinum flavobacterium* not contaminated with any lyases.

17. The method of claim 16 wherein the heparin is in extracellular matrix.